

Need to Empower Nigerian Children and Youths through Information Technology

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Abstract— *Technology has become the driving force of change in the modern world. It has altered our economic structures and ways we communicate. Information is only one of our needs. Email, satellites can not be substituted for drugs; neither can they provide clean water. Massive access to the Internet and ICT can accelerate awareness of these needs and will also facilitate development of solutions to tackle these needs effectively by empowering the youth of this country that are our future hopes. The information highways is leaving the African youth (Nigeria not excluded) poorer in ICT knowledge, skills and global reach. Thousands of young people in Nigeria leave school with the hope of developing a career and sustainable life that often turns into an illusion. The paper looks at the benefits of youth empowering, takes a review of youth empowerment initiatives in other developing countries and presents an approach of empowering Nigeria youths that are future leaders of tomorrow. With this we will move from the realm of educational inadequacy to that of unlimited resources.*

Keywords— *Information Technology, Youth, Empowerment, Information and Communication Technology.*

I. INTRODUCTION

Youth and children in Nigeria suffer high unemployment due to lack of opportunity, physical and psychological challenges because of their poor status in life. Some youth respond to these challenges by engaging in criminal or violent behaviour while others suffer from despair or depression.

Information technology, as defined by the Information Technology Association of America (ITAA), is “the study, design, development, implementation, support or management of computer-based information systems, particularly software applications and computer hardware”. Information technology is the capability to electronically input, process, store, output, transmit, and receive data and information, including text, graphics, sound, and video, as well as the ability to control machines of all kinds electronically.

When computer and communications technologies are combined, the result is information technology, or “infotech”. Information Technology (IT) is a general term that describes any technology that helps to produce, manipulate, store, communicate, and/or disseminate information. Presumably, when speaking of Information Technology (IT) as a whole, it is noted that the use of computers and information are associated. Information Technology is comprised of computers, networks, satellite communications, robotics, cable television, electronic mail (“e-mail”), electronic games, and automated office equipment. The information industry consists of all computer, communications, and electronics-related organizations, including hardware, software, and services. Information technology includes all technologies that enable the handling

of information and facilities different forms of communication. Information technologies have become a significant factor in development, having a profound impact on political, economic and social sectors of many countries, Nigeria not being an exception. Lack of access to information technology has remained a major challenge to youths. There is therefore an urgent need for programmes to engage the youth and children in creative projects in which they can channel their energies into constructive activities. Nigeria a country endowed with a lot of human and natural resources has 37 federal, 37 state and 50 private universities, more than 90 colleges of education and polytechnics and numerous secondary and technical schools. Every year, thousands of these young Nigerians graduate from these schools with the hope of employment, career, and a sustainable life but all these turns into an illusion.

In Nigeria, over 50 million school age children are uneducated, [8]. The paper continued by saying that only a handful of youths have used computers or even know how to apply technology tools in their daily lives for learning and also improving their communities. Most of our primary and secondary schools have less than 5 – 10 computers which are not even used. In the primary schools the teachers are not trained to use these computers and they resort to the old method of teaching which comprises of chalk and blackboard within the four walls of a classroom. This kind of teaching facility is not suited for the kind of education required by these children as these tend to be too far removed from practical reality. One major problem with our teaching is that in this early stage of their training, technology training and courses are not part of their primary and secondary school curriculum and it is at this time that these young people are more likely to take interest in learning new technology. There is therefore the need to empower them through information technology. Young people are often the leading innovators in the use and spread of information technology and they quickly adapt, and are generally hungry for great quantities of information, locally and globally which can be provided through emerging information technologies. It is observed that it is individuals in their twenties that are driving these innovations. The young people who are born to IT’s generation have focused their knowledge, energy and their innovative ideas to make better use of online technology. These young people are the most important group in the networked society of the information age. They have grown up with IT and with this ability they have developed to become technology experts and entrepreneurs instead of children that are obsessed with video games. The consequent empowerment of youth through information technology knowledge and skills will serve as an end to poverty, crime, violence, youth unemployment, etc.

The fourth session of world youth forum of the United Nations system which took place in Dakar 2001 addressed the challenges young people face today and sought ways to enable them communicate their concerns and hopes. This forum adopted Dakar’s youth empowerment strategy which

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contains recommendations and tools to broaden young people's involvement in their societies. During the forum the secretary-general Kofi Annan in his own message to the youths emphasize on the fight against AIDS and unemployment. He pointed out that about 70 million young people were unemployed around the world and he called upon the governments and international organizations for support. He continued by saying that "young people should be at the forefront of global change and innovation. Empowered they can be key agents for development and peace. Some recommendations were made in different areas in which these youths can be empowered and these include the following: education on information and communication technology, employment, health, poverty alleviation, etc.

II. BENEFITS OF IT EMPOWERMENT

Using IT in a meaningful way is the key to success for youths. (A lot of words now have 'electronic' put in front of them e.g. e-education, e-employment, e-health).

A. Education

Information Technology has the potential to improve young people's access to better education. Youth empowerment in IT allows them to benefit from e-education. This will help them obtain quality education like their peers in other countries. With information technology young people have the opportunity to pursue advanced or university education, engage in research or be trained for self-employment. They can also gain the training that will make them IT entrepreneurs or innovators. Schools and vocational training have taken advantage of It to provide distance learning and to train teachers in new instructional methods. Small networks can also provide young people opportunity to develop professionally without having to relocate from their families.

B. Health

Poor health is often caused by lack of information and lack of health services for the youth. This happens mostly in the developing countries and problems resulting from them are, among others, sexually transmitted diseases including infection with HIV, early pregnancies, lack of hygiene and sanitation, mental diseases, drug abuse, unwanted risk-taking and destructive activities. Young people in some parts of the world suffer from poor health as a result of societal conditions. The current generation of young people is especially vulnerable to contracting and transmitting of AIDs. This is because young people are likely to engage in risky behaviour than their elders and this makes them susceptible to the risk of infection. The reason for these ranges from lack of information, peer pressure, inability to calculate risk. With IT, the youths are empowered to make informed choices, have greater potential and opportunity to reduce the number of new infections.

C. Employment

Unemployment and underemployment among youth are problems everywhere. The problem has worsened in recent years because of the global recession which has affected developing countries most recently. The difficulty of finding suitable employment is compounded by a host of other problems confronting young people, which include illiteracy and insufficient training. According to estimates of [6] more than one hundred million new jobs would be created within

the next twenty years in order to provide suitable employment for the growing number of youths in the economically active populations of the developing countries. Unemployment creates a wide range of social ills and young people are particularly susceptible to its damaging effects namely lack of skills, low self-esteem, marginalization, impoverishment and wasting of an enormous human resource. These problems associated with unemployment can be solved by empowering the youth through IT which will enable them have opportunities for self employment. Their opportunities can be increased through technology by training them in specific employment opportunities which is provided by the job market. This will result in successful job placement. The youth if employed through IT can post their CV and find jobs and can even work on-line with e-employment.

D. Poverty

Over one billion people in the world today live in unacceptable conditions of poverty mostly in developing countries. Poverty has various manifestations; hunger, ill health, limited or lack of access to education and other basic services. It is also characterized by a lack of participation in decision making and in civil and socio-cultural life. Poverty is inseparably linked to lack of access to or loss of control over resources. Without those resources, people have limited access to institutions, markets, employment and public services. Young people are affected by this situation. There is therefore need for specific measures to address juvenilization of poverty. The empowerment of youth through IT will reduce their poverty levels because it will provide through education and skills training opportunities for self employment, and enable them gain useful employment and also take care of their health problems.

III. A REVIEW OF YOUTH EMPOWERMENT INITIATIVES THROUGH INFORMATION TECHNOLOGY IN DIFFERENT COUNTRIES

A good progress report in youth empowerment has been recorded in many countries as in [5],[7],[3],[4] and these have yielded a lot of fruits. It is therefore very important to empower the youth in the developing world like Nigeria through IT so as to bridge the Digital Divide which is the gap between those who have technology and those who don't have. This gap can be due to different reasons namely:

- Inability to afford the hardware and software
- The necessary infrastructure might not be available where they live.
- Lack of education and skill to use the technology in a meaningful way.
- Language can also be a barrier since English is used for the majority of the on-line information for those who don't speak English.

"Reference [5]" reports on how easy it is to access information when ever it is needed. Using an interactive map one can find a hotel and book for accommodation from any where in the world. A lot of facilities are available and one can even share ideas from one's bed room in less than a second and these processes are possible through the internet. He observed that it is individuals in their twenties that are driving these innovations. In a country where the majority of the population is under 25, empowerment of youth in technological realm would result in a strengthened democracy and improved economy. In another program titled "Empowering Palestinian Children and youth through digital

media” the youths in refugee camps were empowered by enabling them develop basic skills-sets in new media technology as in [7].

“Reference [2]” a partnership between the private and public sectors which includes Microsoft Unlimited Potential, the worldwide leader in software, services, and solutions, ICTDAR and UNDP Morocco, and the Ministry of Youth established Youth Access Centres across Morocco as part of its youth empowerment initiative. These Youth Centres targeted disadvantaged youths from the ages of 12 to 25 and provided dedicated venues for young people to use computers, access the Internet, and receive computer training. The Youth Centres also provided other educational resources, including a CD library of general subjects, such as history and science, a resource centre for small local businesses and micro-enterprises, and vocational training in English and French. With these the Youth Centres have helped to raise awareness and promote positive behaviour in such areas as health, HIV/AIDS, citizenship, institution building, and personal networking. These youths were trained not only to possess better technology skills, but their skills were also targeted to the specific employment opportunities provided by the local job market, and this resulted in more successful job placement. With this over 2000 young people have received training in information and communication technologies. The initiative has also generated over 100 jobs to date and has also improved the job prospects of the young people trained through the Youth Centres. They have used technology to affect positive change. The youth empowerment initiative has demonstrated how technology can directly improve employment opportunities for disadvantaged youth. This is achieved by deploying ICT tools and training to develop these young people’s work, leadership, and entrepreneurial skills. By providing citizenship education, the Ajjalcom. Youth Centres have shown that the utilization of information and communication technologies can help reduce poverty and increase humann potential.

In Nigeria the “Owerri Digital Village” as in [8] was launched in Imo State by Youth for Technology Foundation (YTF) and was the first of its kind in West Africa. Its mission is to provide disadvantaged Nigeria youth in rural areas with access to technology. This foundation in implementing its programme tried to find out the needs of the communities and how technology can be used to enhance their lives, create jobs, reverse urban migration and lead to self sustaining communities. The Centre offered ICT training to youth between the ages of 8-25. This Programmes has helped to solve youth unemployment, rural poverty and information and technology illiteracy by helping youth develop self-confidence, self-esteem, discipline, team work and to respect and value others who are different from themselves.

Recently, a framework for poverty reduction via Information Technology empowerment was designed to enable youths empower themselves as in “unpublished” [1], from the work it was concluded that IT is a tool that can help individuals expand their consciousness and capacity for empowering themselves. It provides people with a better understanding of the technology and its usefulness in our every day life, its use should increase their access to information which should lead to possible ways of improving their well-being. People are not aware of what they can do with IT. In the framework, information which people overlook have been packaged together for them to use with IT as a platform. The bulk of poor people live in the rural areas

and information is packaged for them because they have IT to help them. This is achieved through equipping their community/village hall with television that impacts knowledge on the poor. IT makes education more attractive using video to teach them in their village halls and this will reduce mass illiteracy.

“Reference [3]”, In india, a nonprofit programme called Digital Equalizer has been used to empower children in the Mumbai slums and other impoverished areas to improve their future by training them to use computers. This programme targeted students who would ordinarily have no choice but to go back to the same low paying sectors as their families have been working from generation to generation. This program which has provided skills far beyond basic computer literacy, has enabled these children to gain professional skills which have expanded their career options.

IV. AN IT EMPOWERMENT APPROACH FOR NIGERIA

The approach is to provide computer/internet sites for school children and university students. To achieve these two strategic resources namely university and teachers, who are already IT professionals are used. This approach can be implemented using Enugu state which can be further implemented in other states of the country.

A program to empower the youth will comprise of the following:

- 17 School Information Centres in the 17 local government areas of Enugu State.
- 170 School Computer Centres.
- Internet connection to the 17 School Information Centres.
- Each School Information Centre in the local government will support an average of 10 schools.
- Two University students internet Centres in each of the 17 local government areas of the state.
- This project can be carried out in phases and each phase will comprise school information Centres, school computer sites and university internet Centres1.

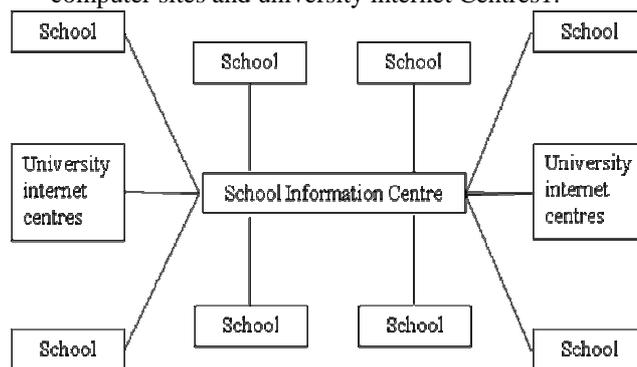


Fig. 1: Model for IT Empowerment for the Youths in Nigeria
This School Information Centre will provide Internet access to schools. It will be used in training teachers in Information Technology and the Internet thereby promoting ICT literacy for the general public. It will be used to produce and download educational websites for use by school children. It will also be used to organize homepages; discussion bulletin board for schools and it will also be used to organize collaborative projects between schools within and outside the state. The school information centre will also provide problem-solving Internet-based information Centres for local professions.

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In this model a standard School Computer Site is equipped with:

At least 5 Pentium III. 1.5GHz Intel processor, 50 GB hard drive, 1GB RAM, 15 inch monitor.

- It should also have one Pentium IV 2GHz Intel processor, server with 80 GB hard drive, 2 GH RAM, 15 inch monitor.
- Multimedia, CD, Speaker and Sound-Card
- Hubs and wiring equipment
- Printer
- Tables and Chairs
- Modem

Also a standard School Information Centre will be equipped with the following:

- One server
- A workstation
- Radio
- 5 Modems
- Internet Access

This school information centre will provide internet access to schools, and will train teachers in information technology and the internet. With this put in place and implemented IT will empower the youths and the youths will empower the states thereby empowering Nigeria.

V. COST ESTIMATION

When performing the cost estimates, the following components listed in table 1 were considered and the cost are as follows:

Table 1: Cost Estimates of Components in Naira.

S/No	ITEM	COST ₦ (Million)
1	860 PIII System	65
2	172 PIV System	16
3	1032 CD Speakers	3
4	172 Hp Printer	9
5	172 Hubs	2
6	1 Router	0.05
7	344 Tables	2.5
8	1032 Chairs	1.5
9	172 Radio	8.6
10	20 Pcks RJ45	.004
11	172 Stabilizer	2.5
12	172 UPS	6.8
13	10 Cartons	.06
GRAND TOTAL (Million Naira)		117.014

VI. ACTION PLAN

The Nigerian government, NGO's the private sector should mobilize their resources to provide free Computer/Internet sites for schools, universities and community centres in the country. They should organize nationwide ICT training for teachers. They should provide distance-learning education for all.

VII. CONCLUSION

Having shown how these empowerment initiatives worked in other developing countries, there is no doubt that if possibly implemented, the youths of this country will empower the country if they are empowered through It. The cost of implementing this will look high but the benefits are much higher. These skills when acquired will put an end to

poverty, crime, violence and youth unemployment. The youth which are future leaders of this country has the potential for outstanding achievements. They can be empowered by IT and Internet to make a better future Nigeria. If nothing is done now we will be faced with an infinitely more divided world with all its potential problems for the human race, but reaching out to the youth of this country will bring the nation to the dawn of a new age of enlightenment. The Nigerian Government, NGO's and private organizations should put their efforts together to accomplish this ideal. When this is achieved education becomes learner-centred rather than teacher-centred and enquiry-driven rather textbook-driven. Learning becomes an enjoyable creative act and the dichotomy between learning and research is resolved. The boundaries between disciplines, between primary, secondary and higher education are blurred. The curriculum is loosened to become inclusive and to aid the enquiring and autonomous student in self directed development.

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